

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A process for forming a decorative surface upon an outboard surface of a wheel disc, the method comprising the steps of:

(a) providing a cutting tool for smoothing a wheel surface that includes a rhombic shaped body portion having a mounting aperture formed therethrough and an insert having a cutting tip carried upon one end of the body portion, the insert having arcuate leading and trailing edges, the insert also having a zero degree land formed thereabout whereby the cutting edge of the insert is maintained tangent to the wheel surface.

(b) mounting a machined vehicle wheel including a wheel rim and having a wheel disc extending radially across the wheel rim ~~in~~ on a lathe;

(c) rotating the wheel;

(d) urging the cutting tool provided in step (a) with a uniform pressure against an outboard surface of the wheel disc and traversing the cutting tool in a radial direction across the outboard surface of the wheel disc to smooth at least a portion of the outboard wheel disc surface such that the smoothed portion of the wheel disc outboard surface has a polished appearance; and

(e) chrome plating the smoothed portion of the outboard wheel surface.

2. (Original) A process according to claim 1 wherein the entire outboard face of the wheel disc is smoothed in step (d).

3. (Original) A process according to claim 1 further including, subsequent to step (d), applying a protective coating to the chrome plated surface.

4. (Original) A process according to claim 3 wherein the coating is a clear coating.

5. (Original) A process according to claim 1 wherein step (d) includes a rate of feed for the wheel lathe that is less than the leading edge radius of the cutting

tool.

6. (Original) A process according to claim 5 wherein step (d) includes a rate of feed for the wheel lathe that is one tenth of the leading edge radius of the cutting tool.

7. (Original) A process according to claim 5 wherein step (d) includes a rate of feed for the wheel lathe that is less than one tenth of the leading edge radius of the cutting tool.

8. (Original) A process according to claim 1 wherein the cutting tool insert is formed from a crystalline material.

9. (Original) A process according to claim 8 wherein the cutting tool insert is formed from a polycrystalline material.

10. (Original) A process according to claim 8 wherein the cutting tool insert is formed from a mono-crystalline material.

11. (Original) A process according to claim 1 wherein the cutting tool insert is coated with a layer formed from a hard substance.

12. (Original) A process according to claim 11 wherein the hard substance is a polycrystalline material.

13. (Original) A process according to claim 11 wherein the hard substance is a mono-crystalline material.

14. (Original) A process according to claim 11 wherein the hard substance is a ceramic material.

15. (Original) A process according to claim 11 wherein the hard substance is a diamond material.

16. (Original) A process according to claim 8 wherein the cutting tool insert leading edge has a leading edge radius and the trailing edge has a trailing edge radius with the leading edge radius being greater than the trailing edge radius.

17. (Original) A process according to claim 16 wherein the cutting tool leading edge radius is twice the trailing edge radius.

18. (Original) A process according to claim 17 wherein the cutting tool leading edge radius is about three mm and said trailing edge radius is about 1.5 mm.

19. (Original) A process according to claim 17 wherein the end of the cutting tool body adjacent to the tip is undercut by an angle in the range of 5 to 15 degrees.

20. (Original) A process according to claim 8 wherein the cutting tool insert has a leading edge having a leading edge radius and a trailing edge having a trailing edge radius with the leading edge radius being equal to the trailing edge radius.

21. (Original) A process according to claim 19 wherein the cutting tool undercut is 5 degrees.

22. (Original) A process according to claim 19 further including a tool holder formed from an anti-vibration material.

23. (Original) A process according to claim 21 wherein the cutting tool insert is canted relative to a surface of the cutting tool body.

24. (Original) A process according to claim 1 wherein the cutting tool leading edge radius is twice the trailing edge radius.

25. (Original) A process according to claim 24 wherein the end of the cutting tool body adjacent to the tip is undercut by an angle in the range of 5 to 15 degrees.

26. (Original) A process according to claim 25 wherein the cutting tool insert is canted relative to a surface of the cutting tool body.

27. (Original) A process according to claim 26 wherein the cutting tool insert is formed from a hard substance.

28. (Original) A process according to claim 27 wherein the cutting tool leading edge radius is about three mm and the trailing edge radius is about 1.5 mm.

29. (Original) A process according to claim 27 wherein the cutting tool leading edge radius is equal to the trailing edge radius.

30. (Currently Amended) A process for forming a decorative surface upon an outboard surface of a wheel disc, the method comprising the steps of:

(a) providing a cutting tool for smoothing a wheel surface that includes a rhombic shaped body portion having a mounting aperture formed therethrough and a crystalline insert carried upon one end of the body portion, the insert having arcuate leading and trailing edges, the insert also having a zero degree land formed thereabout whereby the cutting edge of the insert is maintained tangent to the wheel surface[.];

(b) applying an electrically non-conductive material to a surface of [the] a machined vehicle wheel that includes a wheel rim and has a wheel disc extending radially across the wheel rim;[.]

(c) mounting ~~[[a]] the machined vehicle wheel including a wheel rim and having a wheel disc extending radially across the wheel rim in~~ on a lathe;

(d) rotating the wheel;

(e) urging the cutting tool provided in step (a) with a uniform pressure against an outboard surface of the wheel disc and traversing the cutting tool in a radial direction across the outboard surface of the wheel disc such that a portion of the coating is removed and the portion of the wheel disc outboard surface from which the coating was removed is smoothed and has a polished appearance; and

(f) chrome plating the wheel whereby the remaining coating prevents adhesion of the chrome plating chemicals such that only the portions smoothed in step (e) are chrome plated.

31. (Original) A process according to claim 30 wherein the coating applied in step (b) is a paint.

32. (Original) A process according to claim 31 wherein the paint applied in step (b) includes an inert ingredient.

33. (Original) A process according to claim 30 wherein the coating applied in step (b) is a clear coating.

34. (Original) A process according to claim 33 wherein the clear coating applied in step (b) includes an inert ingredient.

35. (Original) A process according to claim 30 wherein the coating applied in step (b) includes a first layer of paint and a second layer of clear coat with the second layer covering the first layer.

36. (Currently Amended) A process for forming a decorative surface upon

an outboard surface of a wheel disc, the method comprising the steps of:

(a) providing a cutting tool for smoothing a wheel surface that includes a rhombic shaped body portion having a mounting aperture formed therethrough and a crystalline insert carried upon one end of the body portion, the insert having arcuate leading and trailing edges, the leading edge having a leading edge radius and the trailing edge having a trailing edge radius with the leading edge radius being greater than the trailing edge radius, the insert also having a zero degree land formed thereabout whereby the cutting edge of the insert is maintained tangent to the wheel surface.

(b) mounting a machined vehicle wheel including a wheel rim and having a wheel disc extending radially across the wheel rim ~~in~~ on a lathe;

[[f)] (c) rotating the wheel;

[[g)] (d) urging the cutting tool provided in step (a) with a uniform pressure against an outboard surface of the wheel disc and traversing the cutting tool in a radial direction across the outboard surface of the wheel disc such that a portion of the coating is removed and the portion of the wheel disc outboard surface ~~from which the coating was removed~~ is smoothed and has a polished appearance;

[[h)] (e) removing the wheel from the lathe;

[[i)] (f) applying an electrically non-conductive material to the portion of the wheel face surface that was not smoothed in step (g); and

[[j)] (g) chrome plating the wheel whereby the electrically non-conductive coating prevents adhesion of the chrome plating chemicals such that only the portions ~~machined~~ of the outboard wheel surface that were smoothed in step [[g)] (d) are chrome plated.

37. (Currently Amended) A process according to claim 36 wherein the coating applied in step [[i)] (f) is a paint.

38. (Currently Amended) A process according to claim 37 wherein

the paint applied in step [(i)] (f) includes an inert ingredient.

39. (Currently Amended) A process according to claim 36 wherein the coating applied in step [(i)] (f) is a clear coating.

40. (Currently Amended) A process according to claim 39 wherein the clear coating applied in step [(i)] (f) includes an inert ingredient.

41. (Currently Amended) A process according to claim 36 wherein the coating applied in step [(b)] (f) includes a first layer of paint and a second layer of clear coat with the second layer covering the first layer.